

# Amber Solomon

Phone: (770) 597-6176 E-Mail: [asolomon30@gatech.edu](mailto:asolomon30@gatech.edu)  
Website: [www.ambersolomon.com](http://www.ambersolomon.com)

## Education

---

### Ph.D. Human-Centered Computing

Degree Expected: May 2020

Georgia Institute of Technology, Atlanta, GA  
Advisor: Dr. Mark Guzdial

### M.S. Computer Science

Graduated: May 2015

Clemson University, Clemson, SC  
Advisor: Dr. Juan E. Gilbert  
GPA: 3.88

### B.A. Computer Science (Business Administration, Minor)

Graduated: Dec 2012

Clemson University, Clemson, SC  
GPA: 3.6 Cum Laude Honors

## Publications

---

Jackson, F., **Solomon, A.**, McMullen, K., Gilbert, J.E. 2015. *To Start Voting, Say Vote: Establishing a Threshold for Ambient Noise for a Speech Recognition Voting System*. AHFE 2015.

Remy, S., **Solomon, A.** 2015. *Leveraging Cloud Computing and Web Standards to Support Learning Objectives in Multiple Classrooms*. ASEE 2015.

Gilbert, J.E., Moon, D., Dunbar, J., **Solomon, A.**, Daily, S. 2014. *Lab daze: A web-series aimed at changing the student's perceptions of scientists*. ICUE 2014.

Moon, D., **Solomon, A.**, Thomas, S., Taylor, N., Gilbert, J.E. 2014. *Special connections: A social media website for teaching social skills to individuals with cognitive disabilities*. E-Learn 2014.

## Papers Under Review/In Progress

---

**Solomon, A.**, DiSalvo, B., Guzdial, M., MacIntyre, B. 2016., Gilbert, J.E. 2015. *Using Augmented Reality to Make Student Work Visible in an Intro CS Classroom*. ICER 2016. *In Preparation*.

## Workshops

---

**Solomon, A.** 2016. *The Role of Spatial Reasoning in Learning Computer Science*. E-Learn – World Conference on E-Learning. International Computing Education Research (ICER).

**Solomon, A.**, Zhang, D., Jones, R., DiSalvo, B., MacIntyre, B., Guzdial, M. 2016. *Using Projection AR to Add Design Studio Pedagogy to a CS Classroom*. Virtual Reality (VR), IEEE.

MacIntyre, B., Zhang, D., Jones, R., **Solomon, A.**, DiSalvo, B., Guzdial, M. 2016. *Using Projection AR to Add Design Studio Pedagogy to a CS Classroom*. Virtual Reality (VR), IEEE.

## Posters/Presentations

---

**Solomon, A.** 2016. *Using Projection AR to Add Design Studio Pedagogy to a CS Classroom*. GVU Brown Bag.

**Solomon, A.** 2014. *Special Connections: A Social Media Website for Teaching Social Skills to Individuals with Cognitive Disabilities*. E-Learn – World Conference on E-Learning. 2014

**Solomon, A.** 2013. *Tallying Elections: OCR, Optical Scan, and Other Options*. Richard Tapia Celebration of Diversity in Computing.

**Solomon, A.** 2012. Using Optical Character Recognition to Tally Votes. Human-Centered Computing and Visual Computing Seminar.

## Honors and Awards

---

- **[Awarded]** Science, Mathematics, and Research for Transformation (SMART) Scholarship for Service (2015)
- **[Awarded]** Computer Research Association (CRA)-Women Grad Cohort Workshop Scholarship (2015)
- **[Selected]** Alpha Epsilon Lambda (AEL) Clemson University Graduate Student Honor Society (2014)
- **[Selected]** Phi Kappa Phi Clemson University Honor Society (2013)
- **[Selected]** Upsilon Pi Epsilon (UPE) Clemson University Computer Science Honor Society (2012)
- **[Awarded]** Richard Tapia Celebration of Diversity in Computing Attendance Scholarship (2011 & 2013)
- **[Awarded]** LS-SCAMP Scholarship Recipient (2012)
- **[Awarded]** Microsoft Golden Ticket Recipient (2011)
- **[Awarded]** Georgia Tech FOCUS Scholarship Recipient (2011)
- Dean's List (2009, 2011, 2012)

## Internship Experience

---

**Naval Air Warfare Center Training Systems Division (NAWCTSD) 2016**

- Worked with educational and human factors psychologists to design de-escalation training simulator scenarios for police officers.

## Research Experience

---

**[Graduate Research Assistant] Georgia Institute of Technology Aug 2015-Current**

- Conducted a qualitative study using semi-structured interviews and observations to understand the effects of using design studio pedagogy in an introductory computer science classroom.
- Conducted a quantitative study to investigate the role of access to computing and spatial abilities in a student's ability to learn computer science.

**[Graduate Research Assistant] Human-Centered Computing Lab, Clemson University Jan 2013-May 2015**

- Developed HCC and HCI projects including designing and implementing security software in C++ and designing and implementing interfaces for people with cognitive disabilities.
- Conducted a qualitative study using observations to understand the technologies introductory computer science teachers use in the classroom to inform the design of future technologies.

**[Website Developer Intern] Clemson University Restoration Institute (CURI) Jan 2012-May 2012**

- A \$98 million grant for Clemson Energy. Consulted with stakeholders to acquire their requirements in weekly scrums. Implemented and launched a website using PHP, JavaScript, HTML, CSS, and WordPress as the content management system. Wrote documentation for future website developers and stakeholders.

**[Undergraduate Research Assistant]** Human-Centered Computing Lab, Clemson University

**Aug 2012-Dec 2012**

- Developed a culturally relevant educational application for middle school African American students to teach Algebra concepts. Created lesson plans for different mathematical concepts. Created animated lessons in Adobe Flash for each lesson plan.
- Conducted usability studies on an e-commerce website for older persons. Developed the backend of the website in PHP and JavaScript.

## **Selected Projects**

---

**[Project Team Leader]** Project Assassin

**May 2015**

**About:** A security method that does not allow connections from other computers and quickly terminates any possible outside connections.

**Duties:**

- Developed an algorithm in C++ to detect and terminate new processes on a machine in less than 0.05 seconds
- Incorporated this security technology with voting technology to allow overseas military personnel to vote independently and securely in national elections

**[Project Team Member]** Friends of Collette

**Aug 2013-May 2015**

**About:** A social media website to teach people with cognitive disabilities social skills. The social site allows people with cognitive disabilities the opportunity to develop and practice social skills so that they may create meaningful relationships with others.

**Duties:**

- Prototyped a website in HTML5, jQuery, Adobe Dreamweaver, and Adobe Photoshop
- Built an interactive avatar using SitePal API, JavaScript, and Google Chrome Text to Speech Engine to act as an active, user help guide
- Conducted a literature review on usability and design guidelines for the proper affordances for building websites for people with cognitive disabilities

**[Project Team Leader]** AADMLSS

**Aug 2012-May 2015**

**About:** AADMLSS City Stroll is an interactive game-like environment that uses culturally relevant cues, gestures, sounds and lyrics to teach students algebra.

**Duties:**

- Developed software in Java and used Optical Character Recognition to convert an image file to a text file
- Developed a string similarity metric algorithm for matching strings in Java with an accuracy of 90.6%
- Conducting and facilitating national elections in the United States using this software

## **Service**

---

### **Conference Reviewing**

SIGCSE 2017

CSCL 2017

### **Student Mentoring**

Sarah Li, Computer Science, Georgia Institute of Technology

Vedant Pradeep, Chemical Engineering, Georgia Institute of Technology

Nicholas Taylor, Mathematics and Computer Science, University of Richmond

Morris Lee, Industrial Engineering, Clemson University

## Teaching Experience

---

<b>The Bridge Academy</b> (high school, 10 students), Morrow, GA Instructor	<b>Aug 2016-Present</b>
<b>Pink Stem</b> (elementary school, 10 students), Morrow, GA Instructor	<b>Aug 2015-Present</b>
<b>Black Girls Code</b> (elementary school, 20 students), Atlanta, GA Instructor	<b>Aug 2015-Dec 2015</b>
<b>Software Engineering Principles</b> (undergraduate, 100 students), Clemson University Teaching Assistant	<b>Jan 2015-May 2015</b>
<b>Human Computer Interaction</b> (graduate, 100 students), Clemson University Head Teaching Assistant	<b>Jan 2015-May 2015</b>
<b>CodeIT Day</b> (elementary and middle school, 20 students), Clemson University Instructor	<b>May 2012-May 2014</b>
<b>Computer Science</b> (graduate, 100 students), Clemson University Tutor	<b>Aug 2011-May 2012</b>

## Technical Skills

---

**Programming Languages:** JAVA, C++, C, M4, SPARC, RESOLVE, Visual Basic

**Web Technologies:** PHP, HTML5, CSS3, JavaScript, SQL, jQuery

**Applications:** Eclipse IDE for Java Developers, Eclipse IDE for Xtext, RESOLVE Interface, MySQL, Visual Studio, Adobe Flash

**Operating Systems:** Windows, Mac OS X, Linux/Unix